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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,224	09/29/2003	Jose M. Sosa	API- 1018-US	2510

7590 09/24/2004  
Fina Technology, Inc.  
P. O. Box 674412  
Houston, TX 77267-4412

EXAMINER

ASINOVSKY, OLGA

ART UNIT PAPER NUMBER

1711

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/674,224

Applicant(s)

SOSA ET AL.

Examiner

Olga Asinovsky

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/29/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102 or 103***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1, 3-4, 8-11 and 13-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kamath U.S. Patent 4,125,695.

Claimed invention is a process for preparing a HIPS comprising admixing a rubber and styrene monomer in the presence of at least two polymerization initiators comprising at least one polymerization initiator that is a grafting initiator, and other polymerization initiator that is a non-grafting initiator.

The examiner presumes that the polymerization initiators system includes at least two initiators having different half-lives decompose temperature and, therefore, different activity in conjunction with two or more polymerization temperatures for a particular step of a process.

Kamath discloses a process for the free radical polymerization of vinyl monomers including styrene monomer, wherein the temperature of the polymerization is progressively increased during the period of the temperature polymerization of from 50 to 160 C. The initiator system includes at least two initiators, one initiator is sensitive to produce free radicals at the low temperature, and other initiator sensitive to produce free radicals at the high temperature, column 3, lines 1-8. The initiator system can include monofunctional initiator, difunctional initiator and polyfunctional initiator and mixture thereof, column 5, lines 63-68 and column 6, lines 1-20, column 13, line 14, column 14, lines 64-66. The polymerization can be carried out in solution or suspension medium, column 6, line 47, for the present claim 5. The polymerization process is continuous process, column 6, line 49, for the present claim 13. The polymerization process can be applied for producing high impact polystyrene that involves the polymerization of styrene monomer containing dissolved elastomer, column 17, line 46. The styrene monomer is the same as in the present claims. An elastomer is readable as a rubber in the present claims 1 and 3-4. Selection of the combination of two polymerization initiators is depending upon their influence on the functionality and half-lives decompose temperature. It is reasonable to presume that the claimed "grafting initiator" and a "non-grafting initiator" would possess the same properties in the initiators system in Kamath's invention, because Kamath discloses an organic peroxide initiator such as 1,1—bis(t-butylperoxy)cyclohexane or ethyl-3,3-bis(t-butylperoxy)-butyrate, and azo-initiator such as ethylene-bis(4-t-butylazo-4-cyanovalerate or azo-bis-isobutyronitrile, column 8, lines 13, 27 and column 6, line 15. These initiators are

clearly defined in the present claims 8-11. It is a burden on the applicants to provide the difference in order to overcome this rejection under *In re Fitzgerald* 205 USPQ 594.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-5, 8-11, 13-20 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sosa et al U.S. Patent 4,861,827.

Sosa discloses a continuous polymerization of high impact polystyrene using a free radical initiator. The continuous polymerization process can include solvents and other additives, column 2, lines 37-39. The free radical initiator may alternatively be selected as a combination of two or more free radical initiators, column 3, lines 57-59. The examples of free radical initiators that do not form acid by-products upon decomposition at column 5, lines 42-66 are readable in the present claims 8-11. Any addition component(s) in a process for producing a HIPS composition is/are expected as conventional ingredients.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 6-7, 12 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sosa et al U.S. Patent 4,861,827 as applied to claims 1, 3-4, 8-11, 13-20 and 24 above, and further in view of Schrader et al U.S. Patent 5,428,106.

Sosa does not disclose a chain transfer agent and a solvent specified in the present claims 2 and 6.

Schrader discloses a solution polymerization in the presence of ethyl benzene diluent and an initiator and chain transfer agent, column 5, lines 56-58, column 10, lines 27-31 and 38-41. The conventional additives can be employed, column 9, line 64.

It would have been obvious to one of ordinary skill in the art to consider that a process for producing a HIPS composition in Sosa can be modified by adding a chain transfer agent, solvent and any conventional additives as disclosed by Schrader, because Sosa discloses that a solution polymerization can be applied for producing a HIPS composition and the other additives (Sosa, column 2, line 39) can include a chain transfer agent as being a beneficial agent for controlling the rubber particle size and morphology within the rubber-modified styrenic resin, column 5, lines 57-58 in Schrader.

***Claim Rejections - 35 USC § 112***

8. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "non-grafting initiator" for a polymerizable initiator makes a process indefinite because there is no definition for said "non-grafting initiator", nor a polymerization process condition (such as time and/or temperature) that said initiator couldn't work as a grafting initiator. It is not clear the difference between a grafting initiator and a non-grafting initiator.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art is relevant to show the state of the art knowledge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olga Asinovsky whose telephone number is 571-272-1066. The examiner can normally be reached on 9:00 to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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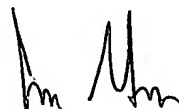
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.A.

O.A.

September 17, 2004

Olga Asinovsky  
Examiner  
Art Unit 1711



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700